REMARKS

The Office Action dated March 26, 2008 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 17-20, 24-25, 56, and 58-73 are pending in the application. Claims 17-20 and 24-25 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 58-73 have been added. Claims 2-5, 11-13, 21-23, and 57 have been withdrawn. Claims 1, 6-10, and 14-16 have been cancelled, without prejudice or disclaimer. No new matter is added. Applicant submits the pending claims for consideration in view of the following.

§103(a) Rejection

Claims 1, 6-10, 14-20, 24-25, and 56 were rejected under 35 U.S.C. §103(a) as being unpatentable over IEEE Std. 802.16-2001 (hereinafter "IEEE") in view of Choi et al. (US 6,272,117, hereinafter "Choi"). The Office Action took the position that IEEE discloses the limitations of claim 1, except for the limitation of transmitting at least one message comprising information based on previous capacity requests. However, the Office Action also took the position that Choi accounts for the deficiencies of IEEE in a manner that renders the claimed invention obvious to one skilled in the art. This rejection is traversed as follows.

As a preliminary matter, because claims 1, 6-10, and 14-16 have been cancelled, without prejudice or disclaimer, the rejections to these claims are hereby rendered moot.

Claim 17, upon which claims 68-69 depend, is generally directed to an apparatus that includes a granting means for granting a transmission capacity subscriber station-specifically, a transmitting means for transmitting capacity grant messages to at least one subscriber station, and a monitoring means for monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations.

Claim 20, upon which claims 70-71 depend, is generally directed to an apparatus that includes a first transmitting means for transmitting capacity request messages of at least one connection and a receiving means for receiving capacity grant messages from a base station. The apparatus also includes an allocating means for connection-specifically allocating a capacity granted by the base station, a second transmitting means for transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station, and a third transmitting means for transmitting data according to a capacity allocation made by the subscriber station.

Claim 24, upon which claims 18-19 and 72 depend, is generally directed to an apparatus that includes a receiver configured to receive capacity request messages from at least one subscriber station and a processor. The processor is configured to grant a transmission capacity subscriber station-specifically, transmit capacity grant messages to the at least one subscriber station, and monitor request messages received from the at

least one subscriber stations, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber station.

Claim 56, upon which claims 58-60 depend, is generally directed to a method that includes transmitting capacity request messages of at least one connection, receiving capacity grant messages from a base station, and connection-specifically allocating a capacity granted by the base station. The method also includes a transmitting messages, wherein the messages comprise information based on previous capacity requests of a subscriber station, and transmitting data according to a capacity allocation made by the subscriber station.

Claim 61, upon which claims 62-63 depend, is generally directed to a method that includes granting a transmission capacity subscriber station-specifically and transmitting capacity grant messages to at least one subscriber station. The method also includes monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations.

Claim 64, upon which claim 65 depends, is generally directed to a computer program embodied on a computer-readable medium. The computer program is configured to control a processor to perform operations that include transmitting capacity request messages of at least one connection, receiving capacity grant messages from a base station, and connection-specifically allocating a capacity granted by the base station. The operations also include transmitting messages, wherein the messages comprise

information based on previous capacity requests of a subscriber station, and transmitting data according to a capacity allocation made by the subscriber station.

Claim 66, upon which claim 67 depends, is generally directed to a computer program embodied on a computer-readable medium. The computer program is configured to control a processor to perform operations that include transmitting capacity request messages of at least one connection, and granting a transmission capacity subscriber station-specifically. The operations also include transmitting capacity grant messages to at least one subscriber station, and monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations.

Each of the foregoing claims recites limitations that are not disclosed or suggested by a combination of IEEE and Choi.

IEEE generally discloses a standard for an air interface of stationary broadband wireless access systems. The standard includes a medium access control layer that is capable of supporting physical layer specifications, and a particular physical layer specification that is applicable to systems that operate between 10 and 66 Gigahertz.

Choi generally discloses a digital sensing access protocol for a wireless data network. In Choi, the wireless data network includes a base station and multiple mobile terminals. The Choi network operates according to a synchronous 2-way communication protocol, where the availability of a communication channel is signaled by the base station in a control packet. Upon receiving the control packet, a mobile station competes

for the channel by sending a request packet. The base station grants the channel to the mobile terminal if the mobile terminal is a "selected" mobile terminal. After the channel is terminated, the base station again transmits a message that the channel is available.

However, a combination of IEEE and Choi fails to disclose or suggest, at least, "connection-specifically allocating the granted capacity by the subscriber station," as recited in claims 20, 25, 56, and 64.

Instead, IEEE discloses, in Chapter 6.2.52, a Real-Time Polling Service that supports real-time service flows that generate packets of varying size on a periodic basis. As such, the Real-Time Polling Service is designed to support, for example, the transmission of real-time video clips, such an MPEG (Moving Picture Experts Group) video. Typically, a base station will periodically provide request opportunities, whereupon subscriber stations will send requests to the base station in accordance with the Real-Time Polling Service. As such, the polling of IEEE includes a base station "asking" each subscriber station whether the subscriber station would like to transmit information. However, IEEE fails to disclose a granting process that follows the disclosed Polling Service. For example, a mobile station implementing the technology disclosed by IEEE would not perform the claimed "connection-specifically allocating" of "the granted capacity."

Additionally, Choi fails to disclose theses claimed features, or otherwise remedy the deficiencies of IEEE. Instead, Choi discloses that a base station may indicate that a channel is available by "piggybacking" channel availability data on an acknowledgement

message. However, Choi fails to disclose or suggest that, for example, the Choi mobile terminal performs the claimed "connection-specifically allocating" of "the granted capacity." Accordingly, Choi fails to remedy the deficiencies of IEEE.

Similarly, a combination of IEEE and Choi fails to disclose or suggest, at least, "monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations," as recited in claim 61, and as analogously recited in claims 17, 24, and 66.

Instead, IEEE, in Chapter 6.2.5, discloses that a base station may anticipate throughput and latency needs for uplink traffic, in addition to providing polls and grants at appropriate times, by specifying a scheduling service and associated Quality of Service (QoS) parameters. IEEE also discloses that that specific data flows can be tailored. These uplink scheduling services are also discussed in Chapters 6.2.5.1, 6.2.5.2, 6.5.2.3, and 6.2.5.4. However, none of the services disclose or suggest that, for example, a base station monitors capacity request messages, capacity grant messages, and received transmission. Accordingly, IEEE fails to disclose the claimed "monitoring capacity request messages received from the at least one subscriber station, capacity grant messages sent by a base station and data transmissions received from the at least one subscriber stations."

Choi also fails to disclose the claimed "monitoring." Instead, Choi discloses that a base station communicates the availability of a communication channel in a control

packet, grants the channel to a mobile station, and re-communicates the availability of the channel after the mobile station no longer needs the channel. However, Choi fails to disclose or suggest that, for example, the Choi base station monitors capacity request messages, capacity grant messages, and received transmission. Accordingly, Choi also fails to disclose or suggest the claimed "monitoring."

In light of the above, Applicant respectfully asserts that a combination of IEEE and Choi fails to disclose or suggest all the limitations of independent claims 17, 20, 24-25, 56, 61, 64, and 66. Therefore, Applicant respectfully requests that the §103(a) rejection of independent claims 17, 20, 24-25, and 56 and related dependent claims be withdrawn. Additionally, Applicants respectfully assert the patentability of new claims 58-73 on similar grounds.

Conclusion

In light of the above, Applicant respectfully requests that the pending claims promptly pass to allowance and issue.

However, if for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

Additionally, the foregoing comments made with respect to the positions presented in the Office Action are not to be construed as acquiescence with other

positions presented in the Office Action that have not been explicitly contested. Accordingly, the above arguments for patentability of a claim should not be construed as implying that there are not other valid reasons for patentability of the claim or other claims. Additionally, the Applicant does not acquiesce that the cited art anticipates or renders obvious any of the claims as previously presented, and reserve the right to pursue any of the previously presented claims in a subsequent application.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

Reg. No. 46,621

Jared T. Olson
Attorney for Applicants
Registration No. 61,058

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Vienna, Virginia 22182-6212
Telephone: 703-720-7800
Fax: 703-720-7802

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